

Tzu-Hui J. Chen

Department of Agricultural & Resource Economics
University of California, Davis
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Education

Ph.D., Agricultural and Resource Economics, UC Davis	2021–expected 2026
M.A., Agricultural Economics and Marketing, National Chung Hsing University	2018–2020
B.A., Sociology, National Taiwan University	2007–2011

Dissertation Committee

Prof. Aaron Smith (Co-Chair) Department of Agricultural & Resource Economics University of California, Berkeley aaronsmith@berkeley.edu	Prof. Richard Sexton (Co-Chair) Department of Agricultural & Resource Economics University of California, Davis rjsexton@ucdavis.edu	Prof. Kevin Novan Department of Agricultural & Resource Economics University of California, Davis knovan@ucdavis.edu
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Major Fields

Environmental Economics, Agricultural Economics, Health Economics

Employment

Graduate Student Researcher, UC Davis	2024– 2026
Teaching Assistant, UC Davis	2022– 2024
Teaching and Research Assistant, National Taipei University	2021
Co-founder, Water-Farmer Co-op	2013–2021
President, Chi-Tsai-Pi Agricultural and Cultural Association	2013–2021
Research Assistant, Chi-Tsai-Pi Agricultural and Cultural Association	2011–2013

Papers and Publications

Chen, Tzu-Hui. 2026. Glyphosate Use, Water Contamination, and Neonatal Health in the United States. *Journal of the Association of Environmental and Resource Economists* 13:3, 755-790. [Link][PDF]

Using a quasi-experimental framework exploiting hydrological flow networks, I estimate how upstream glyphosate applications influence downstream birth outcomes. The findings show how production activities, hydrological connectivity, and socioeconomic disparities interact to shape health outcomes and inform mitigation policies.

Chen, Tzu-Hui, Richard Sexton, and Aaron Smith. 2026. Using Vegetable Oils for Biofuel Accelerates Tropical Deforestation and Increases Carbon Emissions (Submitted). [PDF]

Drawing on remote-sensing data and econometric methods, we estimate the effects of global biofuel demand on deforestation in Southeast Asia and associated carbon emissions. This study highlights how market linkages transmit policy effects across borders and commodities, generating transboundary and cross-commodity impacts on production and environmental outcomes.

Research in Progress

“Estimating US and foreign supply responses to US biofuel policy shocks: Implications for using biofuels to support domestic farmers” (with Andrew Swanson, Aaron Smith, and Richard Sexton)

This paper investigates the economic consequences of using biofuel policies as an agricultural support tool. Focusing on US policies, the study empirically estimates heterogeneous supply responses of oil crop production in the US and the rest of the world, accounting for both agro-climatic conditions and policy-related market segmentation. The results inform the extent to which US biofuel policies can reach the policy goal to support domestic agricultural production.

“Commodity Shuffling and the Limits of the EU Deforestation Regulation” (with Richard Sexton and Aaron Smith)

This study develops a competitive equilibrium trade model to assess the effects of the European Union Deforestation Regulation (EUDR) on curbing global deforestation in highly integrated commodity markets. The paper examines how commodity shuffling may constrain the environmental effectiveness of the EUDR.

“The More You Drank, The Less You Get: Glyphosate’s Impacts on Educational Outcomes”

Presentations and Conferences

“Do EU and US Biofuel Policies Contribute to Deforestation in Indonesia and Malaysia? Evidence from the Sky.” XVIII European Association of Agricultural Economists Congress, Bonn, Germany, 2025.

“Indirect Land Use Changes: Biofuel Demand and Deforestation in Southeast Asia.” Agricultural and Applied Economics Association Annual Meeting, Denver, CO, 2025.

“Beyond the Fields: Glyphosate Water Contamination and Infant Health in the US Corn Belt.” Agricultural and Applied Economics Association Annual Meeting, Denver, CO, 2025.

“Glyphosate Use, Water Contamination, and Neonatal Health in the United States.” Association of Environmental and Resource Economists Annual Meeting, Santa Ana Pueblo, NM, 2025.

“Using Vegetable Oils for Biofuel Accelerates Tropical Deforestation and Increases Carbon Emissions.” UC Davis Agricultural Economics Seminar, Davis, CA, 2025.

“Glyphosate Use, Water Contamination, and Neonatal Health in the United States.” UC Davis Energy and Environmental Economics Seminar, Davis, CA, 2025.

“Glyphosate Use, Water Contamination, and Neonatal Health in the United States.” Social Cost of Water Pollution Workshop, Washington, DC, 2024.

“Health Impact of Glyphosate Water Pollution: Implication of the US Renewable Fuel Standard.” UC Davis NatuRE Policy Lab, Davis, CA, 2024.

“Economic Impacts of Climate Change and Revenue Insurance on Taiwan’s Bananas.” Rural Economics Society of Taiwan Conference, Taipei, Taiwan, 2020.

“Sustainable Agricultural Development: Talampo Amis Community.” Taiwan Social Studies Association Annual Conference, Taipei, Taiwan, 2011.

Fellowships and Awards

Government Scholarship for Studying Abroad, Ministry of Education, Taiwan (\$141,000)	2021
Jastro-Shields Research Award, UC Davis (\$3,000)	2025, 2024
ARE Travel Award, UC Davis (\$2,000)	2025
ARE Summer Research Fellowship, UC Davis (\$4,000)	2024
Best Master's Thesis Award, Rural Economics Society of Taiwan	2020
Undergraduate Research Fellowship, Ministry of Science and Technology, Taiwan	2010

Teaching Experience

Teaching Assistant, UC Davis	
– Econometric Theory and Applications	Fall 2022, Winter 2024
– Intermediate Microeconomics	Spring 2023, Fall 2025
– Economics of Agricultural Sustainability	Winter 2023
– Economic Development	Spring 2024
Teaching Assistant, National Taipei University	
– Environmental Economics	2021

Professional Activities

Referee Service:

- *Journal of Environmental Economics and Management*

Mentoring:

- UC Davis MANRRS Mentorship Program 2025
- UC Davis DIRECT Student Café Graduate Coordinator 2025-2026

Invited Talks:

Endemic Species Research Institute (2020, 2018), Academia Sinica (2019), Taiwan Academy of Ecology (2018), Hungkuang University (2017, 2015), Taiwan Academy of Urban and Rural Development (2017), Providence University (2016), Meinung Farmers' Association (2015), Nanhua University (2014)

Computer Skills

R, Stata, Google Earth Engine, L^AT_EX, Python, ArcGIS

Languages

English (fluent), Mandarin (native), Taiwanese (native)